

DISCUSSION OF THE AMENDMENT

New Claims 19-24 have been added.

Claim 19 is based on the combination of Claims 1, 3 and 9 therein, together with an amount range for component (A), as supported in the specification at page 10, line 6.

Claim 20 corresponds to Claim 11 but depends on Claim 19.

Claim 21 corresponds to Claim 13 but depends on Claim 19.

Claim 22 corresponds to Claim 16 but depends on Claim 19.

Claim 23 corresponds to Claim 17 but depends on Claim 21.

Claim 24 corresponds to Claim 18 but depends on Claim 19.

No new matter is believed to have been added by the above amendment. Claims 1-24 are now pending in the application. Claims 1, 3, 9, 11, 13, and 16-24 are active; Claims 2, 4-8, 10, 12, 14 and 15 stand withdrawn from consideration.

REMARKS

Applicants thank the Examiner and the Examiner's supervisor for the courtesy extended to Applicants' attorney during the interview held September 20, 2010, in the above-identified application. During the interview, Applicants' attorney explained the presently-claimed invention and why it is patentable over the applied prior art, and discussed other issues raised in the Office Action. The discussion is summarized and expanded upon below.

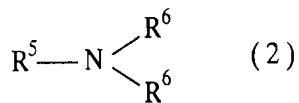
Due to the length of the specification herein, Applicants will cite to the paragraph number of the published patent application (PG Pub) of the present application, i.e., US 2005/0255074, when discussing the application description, rather than to page and line of the specification as filed.

The rejection of Claims 1, 3, 9, 11, 13, 17 and 18 under 35 U.S.C. § 103(a) as unpatentable over US 6,086,663 (Kondo et al) and JP 1997-151119 (Ando et al), in further view of US 5,747,016 (Yui et al), is respectfully traversed.

As recited in Claim 1, an embodiment of the present invention is a hair cosmetic comprising the following components (A), (B) and (C):

(A) organopolysiloxane having an amino-modified organopolysiloxane chain and a polyoxyalkylene chain,

(B) a tertiary amine compound represented by formula (2):



wherein R⁵ represents a linear or branched alkyl or alkenyl group containing 8 to 35 carbon atoms in total, which may be interrupted by a functional group represented by -O-, -CONH-, -OCO- or -COO- or substituted with -OH; R⁶ represents a C1 to C22 alkyl, alkenyl or hydroxyalkyl group, and two R⁶'s may be the same as, or different from, each other,

(C) at least one compound selected from the group consisting of malic acid, succinic acid, maleic acid, salicylic acid, malonic acid, mandelic acid, lactic acid, glycolic acid and salts thereof,

wherein the hair cosmetic has a pH of 3 to 5.

At the recited pH, the tertiary amine is cationic.

As previously explained, the hair cosmetic of the present invention is disclosed as useful in suppressing a frictional feeling of hair during rinsing in running water and improving the softness and smoothness of hair during rinsing, as described in the specification at paragraph [0001].

As also previously explained, and as described in the specification at paragraph [0003], conventionally, cationic compounds such as cationic surfactants and cationic polymers, lubricants, silicones, etc. have been used to improve smoothness during rinsing, but the effect of the cationic surfactants and polymers on suppression of a feeling of a friction in water is limited, and is poor in an ability to confer softness and smoothness. The lubricants hardly suppress a feeling of friction in running water, and dimethyl polysiloxane can be said to be absent in an ability to suppress a feeling of friction in running water and in an ability to confer softness and smoothness. Among the silicones, a polyether-modified silicone is poor in an ability to confer a feeling of softness, and the ability thereof to suppress a feeling of friction and to confer smoothness is not durable. An amino-modified silicone can confer a lasting feeling of softness, but cancels the feeling of softness because of its feeling of friction similar to the feeling of strong rubber in running water.

The present invention addresses the problems of the prior art.

Kondo et al is drawn to a surface modifier composition whose base ingredient is an amidepolyether-modified organopolysiloxane that exhibits an excellent blending stability with respect to cosmetics, lubricants, lustrants, antifoams, fiber-treatment agents, and paints,

and that can provide an excellent use sensation, surface protection, transparency in blending, antistatic properties, and surface lubricity (column 1, lines 17-25). The Examiner relies on Comparative Example 6 therein, which describes a comparative surface modifier composition containing, *inter alia*, an amino-modified polysiloxane, stearyltrimethylammonium chloride, and cetyl alcohol. As shown in Tables 1-3 of Kondo et al, the surface modifier composition of Comparative Example 6 is inferior to Examples 1-3 according to Kondo et al's invention with regard to antistaticity, flexibility, smoothness, oily feel, and raspiness when damp.

The Examiner finds that Kondo et al does not expressly teach the amino-modified polysiloxane of present Claims 3, 9 and 11, or the acids of present component (C). The Examiner thus relies on Ando et al and Yui et al.

Ando et al discloses a hair cosmetic ingredient capable of exerting an antistatic effect on hair [0005], which is a specified reactive silicone-type block copolymer of a particular formula, represented as “Chemical 2” therein [0007] (which is the same as “Chemical 1” in Claim 1 therein.) Ando et al also relies on the disclosure of citric to adjust pH to 5.8 in two exemplified shampoo agents [0025] and [0037]. While Ando et al discloses that it is possible to mix additives routinely mixed with hair cosmetic ingredients so long as they do not adversely affect the effects of their invention, no tertiary amine, let alone those of presently-recited component (B), and no acid within the terms of presently-recited component (C), are disclosed therein [0019].

The Examiner finds that Ando et al does not expressly teach either of the elected alcohol or cationic surfactant components, or the acids of present component (C). The Examiner thus relies on Yui et al.

Yui et al discloses a method of setting hair in which excellent hair setting effect and prolonged set retention can be obtained, favorable soft touch is imparted to the hair after it has undergone a setting treatment, and the shape given by the setting treatment can be easily

restored to the original shape by ordinary shampooing, which method involves the use of a particular organopolysiloxane (column 3, lines 22-29), wherein the organopolysiloxane is one which generates intramolecular or intermolecular cross-linking based on dipole-dipole interaction, hydrogen-bonding or ion bonding, and which is not ruptured or plastically deformed at an extension ratio no more than 15% at a temperature of 20°C under relative humidity of 65% (column 3, lines 36-42), and which polysiloxane, in order to have the above-discussed properties, must contain a polar functional group in a side chain or at a terminal of an organosiloxane segment (sentence bridging columns 4 and 5). Various such polar functional groups are exemplified (column 5, lines 2-20). The Examiner particularly relies on organopolysiloxane A-1, which is described in Synthesis Example 1 (column 13, lines 35-53). The Examiner further relies on the disclosure of pH modifiers such as lactic acid and citric acid as optional ingredients for use with the polysiloxane (column 11, lines 38-41).

The Examiner holds that it would have been *prima facie* obvious “to have incorporated the amino-modified organopolysiloxane component of [Ando et al] **into the invention** practiced by [Kondo et al], particularly since both inventions are directed to the creation of cosmetic compositions, more specifically hair care products. . . and [g]iven the guidance provided by [Yui et al] . . . to further modify the teachings of [Ando et al] and [Kondo et al] to incorporate an acid compound such as lactic acid into the composition” (Emphasis added.)

In reply, and as Applicants’ attorney explained during the above-referenced interview, the organopolysiloxane of Yui et al is **not** an organopolysiloxane having an amino-modified organopolysiloxane chain and a polyoxyalkylene chain, as required by present component (A) herein. Indeed, using the Synthesis Example 1 of Yui et al relied on by the Examiner, a side-chain primary aminopropyl-modified polydimethylsiloxane is used **as an intermediate**,

which is reacted with a terminal reactive poly(N-propionylethyleneimine) to form an N-propionylethyleneimine-dimethylsiloxane copolymer. Thus, the organopolysiloxane of Yui et al's hair setting method is different from, and not suggestive of, present component (A).

In addition, without the present disclosure as a guide, one of ordinary skill in the art would not have combined Yui et al with either Kondo et al or Ando et al, or their combination, as noted by Applicants' attorney during the interview. Yui et al is directed to a particular hair treatment, i.e., setting hair, which hair can be easily restored to its original shape by ordinary shampooing. Neither Kondo et al nor Ando et al is drawn to this particular hair treating utility. Moreover, without the present disclosure as a guide, why would one of ordinary skill in the art include an acid in an amount to obtain a pH of 3-5? The only other disclosure in the above-applied art regarding an acid is the use of citric acid to obtain a pH of 5.8 in a shampoo. In effect, such a disclosure actually teaches away from the presently-claimed invention.

Nor, as Applicants' attorney pointed out during the interview, would one of ordinary skill in the art have combined Ando et al with Kondo et al. While Applicants have previously argued why one of ordinary skill in the art would not do so, the Examiner has not responded to these arguments, even though they are still pertinent, and thus, Applicants incorporate by reference the arguments made in the previous response.

In response to Applicants' argument that one of ordinary skill in the art would not rely on Comparative Example 6 of Kondo et al, and that it would be discarded as, in effect, a failed experiment, in view of its inferiority compared to the inventive **amide** polyether-modified organopolysiloxane invention of Kondo et al, the Examiner finds that said Comparative Example 6 "teaches and suggests Applicants' instantly claimed composition. That is the composition is made known in the art regardless of its qualities."

In reply, the Examiner has never found that Comparative Example 6 of Kondo et al anticipates the present invention. Indeed, it does not, even before the most-recent amendment. However, in view of the present claims, there is even less motivation to further modify Kondo et al. Nor is there any evidentiary support for the Examiner's finding that Q¹ in the amide polyether-modified organopolysiloxane of Kondo et al suggests the tertiary amine compound of formula (2) of the present claims. It is simply incongruous for the Examiner to rely on the inferior and non-inventive amino-modified polysiloxane of Kondo et al for one purpose, and the inventive amide polyether-modified polysiloxane of Kondo et al for another purpose, all to support the present rejection.

Nor has the Examiner made any findings on the comparative data in the specification discussed in the previous Office Action, as explained by Applicants' attorney during the interview. As stated therein, the applied prior art could not have predicted the improved results obtained when using presently-recited component (A), as shown by Products of the Invention 4 and 6-8 herein, compared to Comparative Product 3 which, instead of component (A) herein, employ either a dimethylpolysiloxane; the dimethylpolysiloxane and an amino-modified polysiloxane; a polyether modified polysiloxane; and the amino-modified polysiloxane, respectively. Compare the evaluation data in Table 1 for the Products of the Invention with the evaluation data in Table 2 for the Comparative Products at paragraphs [0106] and [0107] of the specification.

Applicants gratefully acknowledge that the Examiner will withdraw this rejection, as reflected in the Interview Summary for the above-referenced interview.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejection of Claim 16 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Kondo et al, Ando et al and Yui et al, further "in combination with" US 5,078,990 (Martin et al), is respectfully traversed.

Martin et al discloses an aqueous shampoo comprising particular sulfate anionic and quaternary ammonium cationic surfactants that increase the ability of the shampoo (1) to incorporate water-insoluble conditioning agents, particular non-volatile silicone materials, and (2) to remove previously applied conditioning agents and contaminants from the hair (column 4, lines 24-34). Conditioning agents that may be incorporated include such non-volatile silicone materials and, *inter alia*, polysiloxane polydimethyl dimethylammonium acetate copolymers, amino functional silicones, and fatty amido amines such as stearamido propyl dimethylamine (column 10, line 59 to column 11, line 12).

The Examiner holds that it would have been *prima facie* obvious to, in effect, incorporate stearamido propyl dimethylamine of Martin et al into the composition resulting from the combination of Kondo et al, Ando et al and Yui et al.

Without the present disclosure as a guide, one of ordinary skill in the art would not have combined Martin et al with Kondo et al, Ando et al and Yui et al, but even if combined, the result would still not be the presently-claimed invention. The deficiencies in the combination of Kondo et al, Ando et al and Yui et al have been discussed above; Martin et al does not remedy these deficiencies.

Finally, in view of the Examiner's indication that the above-discussed rejection over the combination of Kondo et al, Ando et al and Yui et al will be withdrawn, this rejection should necessarily be withdrawn as well.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

Applicants continue to respectfully traverse the Restriction Requirement.

Regarding the Examiner's new finding that the claims do not relate to a single inventive concept under PCT Rules 13.1 and 13.2, relying on the combination of Kondo et al, Ando et al and Yui et al, it appears that the Examiner believes that a holding of obviousness always justifies a restriction requirement, even when it has been shown that the holding of

obviousness is incorrect. In addition, how can it be justified to require Applicants to elect from among species of organopolysiloxanes of component (A) herein when the reference relied as disclosing this component, i.e., Ando et al, discloses these species?

In the previous response, Applicants argued more than that the claims relate to a single inventive concept under PCT Rules 13.1 and 13.2. However, in the present Office Action, the Examiner continues to ignore various of the arguments made in traversal.

As previously stated, the special technical feature of the present invention is the **combination** of components (A), (B) and (C). In addition, given the breadth of the disclosure in Ando et al of the reactive silicone-type block copolymer therein, there would appear to be little or no burden to examine all of the present claims. The Examiner has not responded.

In addition, the Restriction Requirement is still not clear, as Applicants' attorney noted during the interview. Indeed, it is internally inconsistent. Thus, Claims 3 and 9, which are active, limit component (A) to a block copolymer, but Claims 4, 5, 7 and 8, which are withdrawn, also limit component (A) to a block copolymer. Indeed, in the art rejection, the Examiner finds that Claims 3 and 9 limit component (A) to the block copolymer of formula (4), yet the block copolymer of formula (4) is the subject of withdrawn Claim 4! Active Claim 9 and withdrawn Claim 8 recite the same unit represented by formula (4). Nor is it appropriate to hold Claim 6, which depends on active Claim 1, withdrawn, while Claim 13, which depends on active Claim 3, is active, since Claims 6 and 13 are each drawn to the same embodiment of the presence of a lubricant. Indeed, the withdrawn claims simply are drawn to a narrower embodiment regarding component (A). There is no justification for restricting out, in effect, a preferred species or subgenus from a genus. The Examiner has not responded.

Therefore, Applicants respectfully request that the Restriction Requirement be withdrawn, and all of the presently-pending claims be examined on the merits. Applicants gratefully acknowledge that the Examiner will reconsider the Restriction Requirement, if not withdraw it, as reflected in the Interview Summary for the above-referenced interview.

Applicants respectfully submit that all of the presently-pending claims are now in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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